



# Product Evaluation

WIN2214 | 0617

Engineering Services Program

*The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

*For more information, contact TDI Engineering Services Program at (800) 248-6032.*

**Evaluation ID:** WIN-2214

**Effective Date:** June 1, 2017

**Re-evaluation Date:** January 2019

**Product Name:** Series 9470 Horizontal Roller Aluminum Windows, Impact Resistant

**Manufacturer:** WinDoor Incorporated  
7500 Amsterdam Drive  
Orlando, FL 32832  
407-481-8400  
www.windoorinc.com

## General Description:

System	Description	Label Rating	Design Pressure Rating PSF
1	9470 Horizontal Roller Window 1/3 - 1/3 - 1/3 Flush/Fin Impact (XOX)	LC-PG90 112x64 HS	+/-90
2	9470 Horizontal Roller Window 1/3 - 1/3 - 1/3 Flush Impact (XOX)	LC-PG100 112x64 HS	+100/-135
3	9470 Horizontal Roller Window 1/4 - 1/2 - 1/4 Flush Impact (XOX)	LC-PG100 112x64 HS	+100/-135
4	9470 Horizontal Roller Window 1/4 - 1/2 - 1/4 Flush/Fin Impact (XOX)	LC-PG90 112x64 HS	+/-90
5	9470 Horizontal Roller Window 1/3 - 1/3 - 1/3 Flush/Flange Impact (XOX)	LC-PG100 112x64 HS	+100/-135
6	9470 Horizontal Roller Window 1/4 - 1/2 - 1/4 Flush/Flange Impact (XOX)	LC-PG100 112x64 HS	+100/-135
7	9470 Horizontal Roller Window Flush/Flange Impact (XO)	LC-PG90 75x64 HS	+/-90

**Component Dimensions:**

System	Overall Window Size	Active Sash Daylight Opening Size	Fixed Lite Daylight Opening Size
1	112" x 64"	32-1/8" x 56-1/4" (2)	33-5/8" x 55-5/8" (1)
2	112" x 64"	32-1/8" x 56-1/4" (2)	33-5/8" x 55-5/8" (1)
3	112" x 64"	22-3/4" x 56-1/4" (2)	52-5/8" x 55-5/8" (1)
4	112" x 64"	22-3/4" x 56-1/4" (2)	52-5/8" x 55-5/8" (1)
5	112" x 64"	32-1/8" x 56-1/4" (2)	33-5/8" x 55-5/8" (1)
6	112" x 64"	22-3/4" x 56-1/4" (2)	52-5/8" x 55-5/8" (1)
7	75" x 64"	32-1/8" x 56-1/4" (1)	33-5/8" x 55-5/8" (1)

**Product Identification (Certification Agency Label on Window):**

System		
1	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-1313; CAR 167-567; CAR 167-573
	Product Name	9470 AI EI Impact Horizontal Roller XOX
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E 1886-05 /ASTM E 1996-05/09 Missile Level D; Wind Zone 4
2	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-1315; CAR 167-568
	Product Name	9470 AI EI Impact Horizontal Roller XOX
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E 1886-05 /ASTM E 1996-05/09 Missile Level D; Wind Zone 4
3	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-1316; CAR 167-569
	Product Name	9470 AI EI Impact Horizontal Roller 1/4-1/2-1/4 XOX
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E 1886-05 /ASTM E 1996-05/09 Missile Level D; Wind Zone 4
4	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-1317; CAR 167-570; CAR 167-574
	Product Name	9470 AI EI Impact Horizontal Roller 1/4-1/2-1/4 XOX
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E 1886-05 /ASTM E 1996-05/09 Missile Level D; Wind Zone 4
5	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-1326; CAR 571
	Product Name	9470 AI EI -Flange Impact Horizontal Roller XOX
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E 1886-05 /ASTM E 1996-05/09 Missile Level D; Wind Zone 4

**Product Identification (Certification Agency Label on Window):**

System		
6	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-1327; CAR 167-572
	Product Name	9470 AI EI Fin Impact Horizontal Roller 1/4-1/2-1/4 XOX
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E 1886-05 /ASTM E 1996-05/09 Missile Level D; Wind Zone 4
7	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 167-1334; CAR 167-575
	Product Name	9470 AI EI – Flange Impact Horizontal Roller XO/OX
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08 ASTM E 1886-05 /ASTM E 1996-05/09 Missile Level D; Wind Zone 4

**Impact Resistance:**

System	Impact Resistant	Requirement
1-4	Yes Large Missile Level D	These products satisfy TDI's criteria for protection from windborne debris in the Inland I and Seaward zone. Install the assemblies at a height on the structure that does not exceed the design pressure rating for the assemblies.
5-7	Yes Small Missile Level A	These products satisfy the Texas Department of Insurance's criteria for protection from windborne debris in Inland I and Seaward Zones. The assemblies may only be installed at heights more than 30 feet above grade on the structure as long as the design pressure rating for the assemblies is not exceeded.

**Acceptance of Smaller Assemblies:** Window assemblies with dimensions equal to or smaller than those specified are acceptable with the limitations specified in this report.

**Acceptable Configurations:** XO, OX, XOX.

**Installation:**

System		
1-4	Type of Installation	Windows must be installed and anchored in accordance with WinDoor, Inc. drawing number: <b>9470-TDI-LM</b> , titled "Series 9470 Thermally Broken Large Missile Impact Horizontal Roller Window Single Equal Leg/Flange Elevations" sheets 1 through 21 of 21, dated January 15, 2016, signed and sealed by Lucas A. Turner, P.E on August 4, 2016.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	

**Installation: (continued)**

System		
5,6,7	Type of Installation	Windows must be installed and anchored in accordance with WinDoor, Inc. drawing number: <b>9470-TDI-SM</b> , titled "Series 9470 Thermally Broken Small Missile Impact Horizontal Roller Window Equal Leg/Flange Elevations" sheets 1 through 12 of 12, dated February 20, 2016, signed and sealed by Lucas A. Turner, P.E on August 4, 2016.
	Wall Framing	
	Fasteners	
	Fastener Location/Spacing	
	Fastener Penetration	

**Note:** Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.